IN THE CLAIMS:

1. (Withdrawn) An encoding circuit which includes a frequency converter for frequency-converting data of a processing target block into frequency components, a quantizer for quantizing the frequency components, and an encoder for variable length coding the quantized frequency components in a predetermined scanning order,including:

an EOB detector for detecting a position of a rearmost non-zero quantized frequency component in the processing target block in the predetermined scanning order, and outputting the detected position as a control signal to the encoder; and

said encoder variable length coding the quantized frequency components up to the position in the predetermined scanning order, indicated by the control signal, adding an EOB code that indicates an end of effective components, and pausing the variable length coding process.

2. (Withdrawn) The encoding circuit of claim 1 wherein

the EOB detector is provided between a memory for temporarily retaining the quantized frequency components of the processing target block from the quantizer and outputting the retained frequency components in the predetermined scanning order, and the encoder, and

said EOB detector includes:

a counter for detecting a position of the quantized frequency component that is inputted from the memory;

a comparator for comparing the quantized frequency component with zero;

a buffer for storing values of the quantized frequency components; and

a register for retaining a position of a non-zero quantized frequency component on the basis of a result of the comparator.

3. (Withdrawn) The encoding circuit of claim 1 wherein

the EOB detector is provided between the quantizer and a memory for temporarily retaining the quantized frequency components of the processing target block from the quantizer, and

said EOB detector includes:

a counter for detecting a position of the quantized frequency component that is inputted from the quantizer;

a first comparator for comparing the quantized frequency component with zero;

a buffer for storing values of the quantized frequency components;

a conversion table for converting the value of the counter into an ordinal number of the quantized frequency component in the predetermined scanning order;

a register for retaining a position of a non-zero quantized frequency component in the predetermined scanning order on the basis of a result of the first comparator; and

a second comparator for comparing the position that is retained in the register, with the position of the rearmost non-zero quantized frequency component in the processing target block in the predetermined scanning order.

4. (Withdrawn) The encoding circuit of claim 1 wherein

the EOB detector is provided between the frequency converter and the quantizer, and

said EOB detector includes:

a counter for detecting a position of a frequency component that is inputted from the frequency converter;

a first comparator for comparing the frequency component, with a quantization value as a divisor for dividing the frequency component in the quantizer;

a conversion table for converting the value of the counter into an ordinal number of the frequency component in the predetermined scanning order;

a register for retaining a position of a non-zero quantized frequency component in the predetermined scanning order on the basis of a result of the first comparator; and

a second comparator for comparing the position retained in the register, with the position of the rearmost non-zero quantized frequency component in the processing target block in the predetermined scanning order.

5. (Currently Amended): An encoding circuit ~~that includes~~comprising:

a frequency converter for frequency-converting data of a processing target block into frequency components~~,~~;

a quantizer for quantizing the frequency components~~, and~~;

an encoder for variable length coding the quantized frequency components in a predetermined scanning order~~, comprising:~~; and

an End of Block (EOB) detector for detecting a position of a rearmost non-zero quantized frequency component in the processing target block in the predetermined scanning order, and outputting the detected position as a control signal to the quantizer and the encoder~~;~~,

wherein said quantizer is for quantizing the frequency components up to the position indicated by the control signal in the predetermined scanning order[[,]]~~;indicated by the control signal,~~ and for pausing the ~~quantization process~~quantizing thereafter[[;]], and

said encoder for variable length coding the quantized frequency components up to ~~the~~said position in the predetermined scanning order, as indicated by the control signal, ~~adding~~adds an EOB code that indicates an end of effective components, and ~~pausing~~pauses the variable length coding ~~process~~thereafter.

6. (Currently Amended): The encoding circuit of claim 5, wherein the EOB detector is ~~provided~~ between the frequency converter and the quantizer, and

said EOB detector ~~includes~~comprises:

a memory for temporarily retaining the frequency components of the processing target block from the frequency converter, and outputting the retained frequency components in the predetermined scanning order;

a counter for detecting a position of the frequency component that is inputted from the memory in the predetermined scanning order;

a first comparator for comparing the frequency component[[,]] ~~with~~using a quantization value as a divisor for dividing the frequency component in the quantizer;

a buffer for storing values of the frequency components; and

a register for retaining a position of a non-zero quantized frequency component in the predetermined scanning order ~~on the basis of~~based on a result of the first comparator.

7. (Withdrawn) An encoding method comprising:

a frequency conversion step of frequency-converting data of a processing target block into frequency components;

a quantization step of quantizing the frequency components;

an EOB detection step of judging whether the quantized frequency component is zero or not, and detecting a position of a rearmost non-zero quantized frequency component in the processing target block in a predetermined scanning order; and

an encoding step of variable length coding the quantized frequency components up to the position in the predetermined scanning order, detected in the EOB detection step, adding an EOB code that indicates an end of effective components, and pausing the variable length coding process.

8. (Withdrawn) An encoding method comprising:

a frequency conversion step of frequency-converting data of a processing target data into frequency components;

an EOB detection step of comparing the frequency components with a quantization value as a divisor for dividing the frequency components in a quantization process, and detecting a position of a rearmost non-zero quantized frequency component in the processing target block in a predetermined scanning order;

a quantization step of quantizing the frequency components; and

an encoding step of variable length coding the quantized frequency components up to the position in the predetermined scanning order, detected in the EOB detection step, adding an EOB code that indicates an end of effective components, and pausing the variable length coding process.

9. (Currently Amended): An encoding method comprising:

~~a frequency conversion step of~~ frequency-converting data of a processing target block into frequency components;

detecting an End of Block (EOB) of the frequency components ~~detection step of~~by comparing the frequency components ~~with~~using a quantization value as a divisor for dividing the frequency components in a quantization process, and detecting a position of a rearmost non-zero quantized frequency component in the processing target block in a predetermined scanning order;

~~a quantization step of~~ quantizing the frequency components up to ~~the~~said position in the predetermined scanning order~~, detected in the EOB detection step~~, and pausing the ~~quantization process~~quantizing thereafter; and

~~an encoding step of~~ variable length coding the quantized frequency components up to ~~the~~said position in the predetermined scanning order, adding an EOB code that indicates an end of effective components, and pausing the variable length coding ~~process~~thereafter.

10. (Withdrawn) An encoding program for making a computer implement a process of frequency-converting data of a processing target block, quantizing frequency components, and variable length coding the quantized frequency components in a predetermined scanning order,

said process comprising:

a frequency conversion step of frequency-converting the data of the processing target block into frequency components;

a quantization step of quantizing the frequency components;

an EOB detection step of judging whether the quantized frequency components are zero or not, and detecting a position of a rearmost non-zero quantized frequency component in the processing target block in the predetermined scanning order; and

an encoding step of variable length coding the quantized frequency components up to the position in the predetermined scanning order, detected in the EOB detection step, adding an EOB code that indicates an end of effective components, and pausing the variable length coding process.

11. (Withdrawn) An encoding program for making a computer implement a process of frequency-converting data of a processing target block, quantizing frequency components, and variable length coding the quantized frequency components in a predetermined scanning order,

said process comprising:

a frequency conversion step of frequency-converting the data of the processing target block into frequency components;

an EOB detection step of comparing the frequency components with a quantization value as a divisor for dividing the frequency components in a quantization process, and detecting a position of a rearmost non-zero quantized frequency component in the processing target block in the predetermined scanning order;

a quantization step of quantizing the frequency components; and

an encoding step of variable length coding the quantized frequency components up to the position in the predetermined scanning order, detected in the EOB detection step, adding an EOB code that indicates an end of effective components, and pausing the variable length coding process.

12. (Currently Amended): ~~An~~ A computer-readable medium having computer-executable instructions for encoding ~~program for making a computer implement a~~ process, ~~of frequency-converting data of a processing target block, quantizing frequency components, and variable length coding the quantized frequency components in a predetermined scanning order, said process~~ the computer-readable medium, comprising:

~~a frequency conversion step of~~computer-executable instructions for frequency-converting ~~the~~ data of ~~the~~a processing target block into frequency components;

computer-executable instructions for detecting an End of Block (EOB) ~~detection step~~ of the frequency components by comparing the frequency components ~~with~~using a quantization value as a divisor for dividing the frequency components in a quantization process, and detecting a position of a rearmost non-zero quantized frequency component in the processing target block in the predetermined scanning order;

computer-executable instructions for ~~a quantization step of~~ quantizing the frequency components up to the position in the predetermined scanning order, ~~detected in the EOB detection step,~~ and pausing the ~~quantization process~~quantizing thereafter; and

computer-executable instructions for ~~an encoding step of~~ variable length coding the quantized frequency components up to the position in the predetermined scanning order, adding an EOB code that indicates an end of effective components, and pausing the variable length coding ~~process~~thereafter.